

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/021,656	12/12/2001	Gary Carlton Johnson	,	, 4604	
7590 11/06/2006		EXAMINER			
Gary C Johnson			WRIGHT, DIRK		
2064 Lafayette Detroit, MI 48207			ART UNIT	PAPER NUMBER	
,	•		3681	3681	
			DATE MAILED: 11/06/2006		

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application N	lo.,	Applicant(s)	<u> </u>			
Office Action Summary		10/021,656		JOHNSON, GARY CARLTON				
		Examiner		Art Unit				
		Dirk Wright		3681				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply								
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).								
Status								
1)	Responsive to communication(s) filed on							
,—	This action is FINAL . 2b) This action is non-final.							
,	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is							
,_	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.							
Dispositi	ion of Claims							
4)⊠	Claim(s) 17 and 18 is/are pending in the appl	lication.		,				
•	4a) Of the above claim(s) is/are withdrawn from consideration.							
5)	5) Claim(s) is/are allowed.							
6)	S) Claim(s) is/are rejected.							
7)🖂	Claim(s) 17 and 18 is/are objected to.		,					
8)□	Claim(s) are subject to restriction and	or election requ	irement.					
Applicat	ion Papers							
9)[The specification is objected to by the Examir	ner.						
10)	The drawing(s) filed on is/are: a) ac	ccepted or b) 🗌	objected to by the E	Examiner.				
	Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).								
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.								
Priority (ınder 35 U.S.C. § 119							
•	Acknowledgment is made of a claim for foreig	an priority under	35 S C	h-(d) or (f)				
	Acknowledgment is made of a craim for loreig	gn priority under	55 5.5.5. § 115(a)	(u) or (i).				
۵)	1. Certified copies of the priority documents have been received.							
	2. Certified copies of the priority documents have been received in Application No							
	3. Copies of the certified copies of the priority documents have been received in this National Stage							
	application from the International Bureau (PCT Rule 17.2(a)).							
* See the attached detailed Office action for a list of the certified copies not received.								
				٠				
Attachmen	t(s)							
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date.								
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date. 5) Notice of Informal Pate								
Paper No(s)/Mail Date 6) Other:								

Application/Control Number: 10/021,656

Art Unit: 3681

Response to Amendment

The finality of the previous Office Action, mailed December 6, 2005, is hereby withdrawn. The Amendment filed March 2, 2006 has therefore been entered.

Drawings

The amendment filed March 2, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material that is not supported by the original disclosure is as follows: The added details in the new drawing are new matter, as detailed in the previous Office Action. Applicant may use the original drawings instead.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

Claims 17 and 18 are objected to because of the following informalities: The claims are replete with minor grammatical and antecedent errors. See the suggested claim amendments below. Appropriate correction is required.

Suggested Amendments to the Claims

The following claims 17 and 18 drafted by the examiner and considered to distinguish patentably over the art of record in this application, are presented to applicant for consideration:

Claim 17 (amended), what is claimed is; A a new differential for a vehicle that is a combination of two planetary gears that, can rotate both axle sections of the said vehicle; under

Art Unit: 3681

all road conditions and yet allows axle section rotation variability when needed, said differential comprising:

at least one first bevel gear planetary gear including;

a drivable case (8) having a means of rotatable support in a housing, bevel pinion gears (13,14) rotatively mounted in said case (8) on pinion gear shafts (3,4) side bevel gears (11,12) mounted for rotation in said case (8) and meshing with said pinion gears (13,14), a first axle shaft (5) stationary to one a side bevel gear (12), and a second axle shaft (10) stationary to the other it's opposing side bevel gear whether; directly or indirectly, said differential further comprising; at least one second planetary gear including: said drivable a rotatable case (8) in a housing, two sun gears (6,7), at least one planet gear (15,16) a planetary gear carrier (9), a hollow intermediate shaft (19), a said first axle shaft (5), and a said second axle shaft (10); wherein:

- (a) said planetary gear carrier (9) being; independently rotational of any other housing of the said differential; and supporting the said at least one planet gear (15,16) and the said planetary gear carrier (9) being; axially stationary to said other a side gear (11), axially and rotationally supported in differential housing (8), and axially stationary to said second axle (10),
- (b) a hollow intermediate shaft (19) stationary to <u>said</u> case (8) by; <u>a</u> support member (1), and support stock (2), said intermediate shaft (19) being; coaxial with the said first axle shaft and <u>said</u> pinion gear shafts (3,4), said intermediate shaft being; disposed coaxial with the said first axle shaft (5), and
- (c) <u>said</u> a first sun gear (7) being; open throughout it's central axial stock and axially stationary to the end of said intermediate shaft (19), and

Page 4

(d) said a second sun gear (6) axially stationary to a the protruding end of said first axle shaft (5), and

- (e) at least one gear shaft (17,418) mounted the said planetary gear carrier, being; off of center, stationary, and parallel to the axis of said planetary gear carrier, and
- (f) <u>said</u> at least one planet gear (15,/16) having; rotational and radial support in said planetary gear carrier (9) by way of; said at least one gear shaft (17,/18) and said at least one planet gear (15,/16) meshing with said first and second sun gears (6, and 7).

Claim 18 (amended), as claimed in claim 17, a The combination planetary gear differential according to claim 17 having; said at least one second planetary gear comprising: said a case (8) drivable for rotation in a housing, said two sun gears (6,7), said at least one planet gear (15,16), said a planetary gear carrier (9), said a hollow intermediate shaft (19), and said support stock (2) / and said support member(s) (1,2) (1); for said intermediate shaft (19); wherein:

- (a) said a case (8) rotatable in a stationary housing having axial openings,
- (b) said planetary gear carrier (9) axially rotatable and in said case (8), and
- (c) <u>said</u> a hollow intermediate shaft (19) axially fixed stationary in to said case (8) by <u>said</u> support member (1) \(\frac{1}{2} \) and <u>said</u> support stock (2) (1,2), said intermediate shaft entered into said planetary gear carrier (9), and
- (d) said a first sun gear 7 axially fixed / stationary to the end of said intermediate shaft (19), and

Application/Control Number: 10/021,656

Art Unit: 3681

- (e) <u>said</u> a first <u>axial</u> axle shaft (5) rotatably and coaxially entered through said intermediate shaft (19) and said first axle shaft (5) protruding past said intermediate shaft (19), and (9) a second sun gear <u>fixed</u> stationary to the <u>inner</u> protruding end of said axle shaft (5), and
- (g) <u>said</u> at least one gear shaft (17,18) mounted in the said planetary gear carrier (9); off of center and parallel to the central axis of the said rotatable case (8), and
- (h) <u>said</u> at least one planet gear (15,16) rotatable on said at least one off of center gear shaft (17,18), said at least one planet gear (15,16) meshing with said first and second sun gears (6, and 7).

Conclusion

This application is in condition for allowance except for the formal matters as detailed in the above action.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dirk Wright whose telephone number is 571-272-7098. The examiner can normally be reached on Monday through Friday, 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/021,656

Art Unit: 3681

Page 6

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dirk Wright Primary Examiner Art Unit 3681

DW Wednesday, November 01, 2006